

Unit 3 Periodic Table

Intro Notes

History – attempts to classify elements

Dobereiner: used groups of three (_____)

***only knew about 30 elements at this point

The mass of the middle element is about equal to the average mass of the other two:

Example:

Law of octaves by Newlands (1865): the properties basically repeated every eighth element.

Examples:

***only knew about 62 elements at this point

Mendeleev (1869): made the first modern periodic table.

Arranged elements based on _____

He even made predictions about elements that hadn't even been discovered yet.

Modern Periodic Table:

1) Originally the periodic table was based on increasing atomic weight (later changed to increasing _____)

2) Elements with similar e- configurations are listed in _____

3) Columns are called _____ or _____

4) Rows are called _____

5) Elements in the same period have the same number of _____

Octet Rule: atoms gain or lose e^- to acquire 8 e^- in their outer shell

***Note: 8 e^- is very stable

Examples:

Special Family Names:

IA – alkali metals

IIA – alkaline earth metals

B – transition metals

VIIA – halogens

VIIIA – noble gases